

REMARKS

This is a full and timely response to the outstanding Office Action mailed on June 23, 2005. For at least the following reasons, it is submitted that this application is in condition for allowance.

Claims 4 and 5 are rejected under 35 U.S.C. 102(a) as allegedly anticipated by Oku (US patent 6,525,595). Applicants respectfully traverse this rejection for at least the reason below.

Claim 4, as previously amended, recites:

4. A voltage regulating device for a charge pump, wherein the charge pump outputs an output voltage according to a first clock signal, a second clock signal, a third clock signal, and a fourth clock signal while the voltage regulating device comprises:

a first voltage regulating capacitor whose one terminal is coupled to an output terminal of the charge pump while the other terminal receives a first inverse clock signal, which is the complement of the first clock signal;

a second voltage regulating capacitor whose one terminal is coupled to the output terminal of the charge pump while the other terminal receives a second inverse clock signal, which is the complement of the second clock signal;

a third voltage regulating capacitor whose one terminal is coupled to the output terminal of the charge pump while the other terminal receives a third inverse clock signal, which is the complement of the third clock signal; and

a fourth voltage regulating capacitor whose one terminal is coupled to the output terminal of the charge pump while the other terminal receives a fourth inverse clock signal, which is the complement of the fourth clock signal.

(*Emphasis added.*) Applicants submit that claim 4 patently defines over the cited art for at least the reason that the cited art fails to disclose the features emphasized above.

In contrast, Oku recites:

"In the charge pump 1, for example, nine N-channel transistors Tr0 to Tr8 are connected in series. The transistors Tr0 to Tr8 are, e.g., non-doped transistors. The transistor Tr0 on the first stage is provided for preventing backflow of a current and is diode-connected to power source, and a voltage for charge pump Vcp is supplied to the gate and

source thereof. A voltage V_{pp} is outputted to an EEPROM from the drain of the transistor Tr8 on the final stage. Further, regarding capacitors C1 to C8, one terminal is respectively connected to nodes N1 to N8 each being provided between the adjacent transistors. The clock signals CLK1 to CLK8 are inputted to the other terminals of the capacitors C1 to C8. The capacitors C1 to C8 each have a capacity of, e.g., about 8 pF."

(See col. 5, lines 11-24)

Significantly, Oku's C1-C4 are components of charge pump 1. Further, one terminal of Oku's capacitors C1 to C4 are respectively connected to nodes N1 to N4 each being provided between the adjacent transistors. That is, Oku's C1-C4 in Fig. 5 or Fig. 12 are disposed inside the charge pump 1, and one terminal of C1 to C4 is seperated by transistors and are not coupled to the same node. Oku does not disclose that a one terminal of the first voltage regulating capacitor is coupled to an output terminal of the charge pump, and one terminal of the second, third, and fourth voltage regulating capacitors is coupled to the output terminal of the charge pump, as recited in Applicant's claim 4. That is, Oku does not disclose that "the first, second, third, and fourth voltage regulating capacitors are all coupled to the output terminal of the charge pump", and "the first, second, third, and fourth voltage regulating capacitors are all disposed outside the charge pump". For at least this reason, the rejection is misplaced and should be withdrawn.

Further, the invention defined by Applicants' claim 4 has the advantage of regulating the output voltage of the charge pump (see paragraph [0022] of the Applicants' specification), which is not disclosed in Oku.

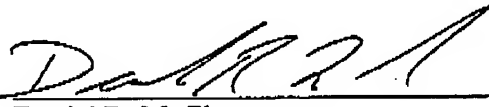
As such, it is submitted that Applicants' independent claim 4 and claim 5 dependent therefrom are patentable. Thus, the application is in condition for allowance. If, in the opinion

of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

No fee is believed to be due in connection with this amendment and response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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